| Index of Claims |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|
|                 |  |  |  |  |  |  |  |  |  |  |  |  |

| <br>Application No. | Applicant(s)     |
|---------------------|------------------|
| 10/617,373          | HILL, RAYMOND G. |
| Examiner            | Art Unit         |
| Thach H Bui         | 3752             |

| √ | Rejected |
|---|----------|
| = | Allowed  |

| _ | (Through numeral)<br>Cancelled |
|---|--------------------------------|
| + | Restricted                     |

| Ν | Non-Elected  | Α | Appeal   |
|---|--------------|---|----------|
| _ | Interference | 0 | Objected |

| Cla   | aim      | Claim Date |                 |          |          |          |          | Claim Date |          |          |              |          |          | ]::::    | С       | aim  | Date            |          |         |       |          |            |          |                 |          |          |          |          |          |            |          |
|-------|----------|------------|-----------------|----------|----------|----------|----------|------------|----------|----------|--------------|----------|----------|----------|---------|--|-----------------|----------|---------|-------|----------|------------|----------|-----------------|----------|----------|----------|----------|----------|------------|----------|
|       | <u></u>  | 4          |                 |          |          |          |          |            |          |          |              | 3l       |          |          |         |  |                 | T        |         |       |          | _          |          |                 |          |          |          |          |          |            |          |
| Final | Original | 12/13/04   |                 |          |          |          | i        |            |          |          | Final        | Original |          |          |         |  |                 |          |         |       | Final    | Original   |          |                 |          |          |          |          |          |            | İ        |
| iĒ    | )rig     | 21         |                 |          |          |          | Ì        |            |          |          | 造            | rig      |          |          |         | 1  |                 |          |         |       | ίĒ       | <u>.</u> E |          |                 | ı        |          |          |          |          |            |          |
|       | O        | 1          |                 |          |          |          |          |            |          |          |              | 0        |          |          |         | 1  |                 | -        |         |       |          | 0          |          |                 | ı        |          |          |          |          | ı          |          |
|       | 1        | =          |                 |          |          |          |          |            |          |          |              | 51       | $\Box$   | $\neg$   |         | 1  | П               | $\neg$   | _       |       |          | 101        | П        | $\Box$          |          |          |          |          |          | _          |          |
|       | 2        | =          |                 |          |          |          | $\neg$   |            |          |          |              | 52       |          | _        | $\neg$  | $\top$   |                 |          |         |       |          | 102        | П        |                 |          |          |          |          | $\neg$   | $\neg$     |          |
|       | 3        | Ξ          | $\Box$          |          |          |          | 一        | $\neg$     |          |          | ·            | 53       | $\Box$   | $\neg$   |         | †  | Н               | $\dashv$ | $\top$  | 1     |          | 103        |          | $\dashv$        | _        | $\neg$   | $\neg$   |          | $\neg$   | $\neg$     |          |
| _     | 4        | =          |                 | 一        |          |          | _        |            |          |          |              | 54       |          | $\dashv$ | 1       | 1  | H               | _        | +-      |       |          | 104        | Н        | $\dashv$        | 一        | $\neg$   |          |          |          | $\dashv$   | $\neg$   |
|       | 5        | =          | $\Box$          | $\neg$   |          | $\neg$   |          |            | $\dashv$ |          |              | 55       | $\Box$   | $\dashv$ | _       | 1  | Н               |          |         | 1     |          | 105        | $\vdash$ |                 | $\dashv$ | $\neg$   |          | $\vdash$ | _        | -          | $\dashv$ |
|       | 6        | =          | $\vdash$        | _        | $\neg$   |          | 一        |            | $\neg$   |          | <u> </u>     | 56       | _        | _        | - -     | +-   |                 |          | +       | liii  |          | 106        | Н        |                 | 一        |          | $\dashv$ |          |          | 一          | $\dashv$ |
|       | 7        | =          |                 | $\neg$   | $\neg$   | $\dashv$ | $\dashv$ | _          |          |          |              | 57       | $\dashv$ |          |         | $\dagger$  | Н               | $\dashv$ | +-      |       |          | 107        | Н        | $\vdash$        | +        | $\dashv$ | $\dashv$ | $\vdash$ | -        |            | _        |
|       | 8        | =          | $\Box$          | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | -          | $\dashv$ | $\neg$   |              | 58       | $\dashv$ | +        | +       | ╁  | Н               | -        |         | l     |          | 108        | Н        | $\dashv$        | -+       | $\dashv$ | $\dashv$ | _        | $\dashv$ |            | -        |
| -     | 9        | =          | -               | -        |          | -        | $\dashv$ | _          |          | -        | _            | 59       | $\dashv$ | $\dashv$ | ┰       | +-   | Н               |          | +       | liiii |          | 109        | -        | -               | $\dashv$ | $\dashv$ | $\dashv$ | _        | -        | -          | -        |
| -     | 10       | =          | -               | ᅥ        | $\dashv$ | -        | -        | _          | $\dashv$ | -i       | $\vdash$     | 60       | $\dashv$ | -        |         | +  | $\vdash$        | -        | +       | ł     |          | 110        | Н        | $\dashv$        | -        | $\dashv$ | $\dashv$ |          | $\dashv$ | -          | ⊣        |
|       | 11       | =          | $\vdash \vdash$ | ᅱ        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$   | $\dashv$ | $\dashv$ | <del> </del> | 61       | $\dashv$ | +        | +-      | +  | $\vdash$        | +        | +       | 1     |          | 111        | $\vdash$ | $\vdash$        | $\dashv$ | $\dashv$ | $\dashv$ | H        | $\dashv$ | +          | $\dashv$ |
|       | 12       | Ē          | $\vdash$        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$   | $\dashv$ | $\dashv$ |              | 62       | $\dashv$ | $\dashv$ | +-      | ╁  | $\vdash$        | $\dashv$ | +       |       |          | 112        | $\vdash$ | $\vdash \vdash$ | $\dashv$ | -        |          | -        | $\dashv$ | $\dashv$   | $\dashv$ |
|       | 13       | ⊢          | $\dashv$        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$   | $\dashv$ | $\dashv$ |              | 63       | -        | -+       | +       | +  | $\vdash$        | $\dashv$ | +       | 1     |          | 113        | Н        | $\vdash \vdash$ | $\dashv$ | -        | -1       | $\vdash$ | $\dashv$ |            | ᅱ        |
|       | 14       | $\vdash$   | $\vdash$        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$   | $\dashv$ | $\dashv$ | <u> </u>     | 64       | $\vdash$ | +        | +       | +  | $\vdash$        | $\dashv$ | +-      | 1     |          | 114        | Н        | $\mid - \mid$   | $\dashv$ | -        | -        | $\vdash$ | $\dashv$ |            | $\dashv$ |
|       | 15       | $\vdash$   | -+              | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$   | -        | $\dashv$ |              | 65       | -+       | -        | +       | +  | $\vdash \vdash$ | $\dashv$ | +       | 1     |          | 115        | -        | $\vdash$        | $\dashv$ | $\dashv$ | $\dashv$ | $\vdash$ | $\dashv$ | -          | $\dashv$ |
| -     | 16       | -          | $\dashv$        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | -          | -        | $\dashv$ | <del></del>  | 66       |          |          | +       | +-   | $\vdash \vdash$ | +        | +       | 1     | <u> </u> | 116        | Н        | $\vdash \vdash$ | $\dashv$ | -        | $\dashv$ | Н        | $\dashv$ |            | $\dashv$ |
| -     | 17       | -          | -               | -        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$   | $\dashv$ | $\dashv$ |              | 67       | -        |          |         | +  | $\vdash$        | $\dashv$ | +       | ł     |          | 117        | $\vdash$ |                 | $\dashv$ | $\dashv$ | -        | Н        | $\dashv$ | -          | _        |
|       |          | -          | $\vdash$        | $\dashv$ | $\dashv$ | -        | $\dashv$ | -          |          | ᅱ        |              |          | -        |          | +       | +  | Н               |          | +-      | H     |          |            |          | $\dashv$        | $\dashv$ | $\dashv$ | $\dashv$ |          | $\dashv$ |            | -        |
|       | 18<br>19 | -          | $\dashv$        | -        | $\dashv$ | $\dashv$ | -        | -          |          | ᅱ        |              | 68       | $\vdash$ | $\dashv$ | +       | +  | $\vdash$        | +        | +       | ł     |          | 118        | -        | $\vdash$        | -        | -        | -        | _        | $\dashv$ | -          | 긕        |
|       |          |            | $\vdash$        | $\dashv$ | -        | -        |          | -          | -        |          |              | 69       | $\vdash$ | $\dashv$ | +       | +  | $\vdash$        | -        |         | liii  |          | 119        | Н        | $\vdash$        | $\dashv$ | -        | -        | _        | -        |            |          |
|       | 20       | -          |                 |          |          | $\dashv$ | $\dashv$ | $\dashv$   | $\dashv$ | 괵        |              | 70       | -        |          |         | ┿  | Н               | _        | +       | l     |          | 120        |          |                 | -        |          |          | _        | $\dashv$ | _          | _        |
|       | 21       | _          | $\vdash$        | -        | $\dashv$ | 4        | -        |            | -        |          |              | 71       | _        | _        | +       | -  | Н               | _        | -       |       |          | 121        | _        | Ш               | _        | _        | _        |          | _        | _          | ᆜ        |
|       | 22       |            | $\dashv$        | $\dashv$ | -        | -        |          |            | -        | _        |              | 72       | _        | _        | _       | —  | $\vdash$        |          |         |       |          | 122        | Ш        | Ш               | _        | _        | _        |          |          |            |          |
|       | 23       |            | $\vdash$        |          |          | -        | [        |            |          | _        |              | 73       | _        |          | _       |  |                 | _        |         |       | _        | 123        | Ш        | Щ               | _        | _        | _        | _        | 4        | _          | _        |
|       | 24       | <u> </u>   | $\dashv$        | -        | _        | _        | 4        | _          | _        | _        |              | 74       | -        |          | _       | ┦—   | $\square$       | _ -      | -       |       |          | 124        | Ш        |                 | _        | _        | _        |          | _        | 4          | _        |
|       | 25       | _          | -               |          | $\dashv$ | $\dashv$ | $\dashv$ |            |          | 4        |              | 75       | -        |          | +       | $\bot$   | Ш               | _        | -       |       |          | 125        |          |                 | _        | _        | _        |          | _        | _          | _        |
|       | 26       |            | -               | _        | _        | -        | 4        | _          | _        | _        |              | 76       | _        |          |         | ╄  | $\square$       | _        | -       |       |          | 126        | _        |                 | _        | _        | _        |          | _        | _          | ᆜ        |
|       | 27       | _          | $\vdash$        | -        |          | -        | -        | _          |          | _        |              | 77       | _        | 4        | +       | ₩  | Щ               |          |         |       |          | 127        | Ш        | $\Box$          | _        | _        | _        | _        |          | _          |          |
|       | 28       |            | $\rightarrow$   | 4        | _        | -        | -        |            | _        | _        |              | 78       |          | _        | _       | ╄  |                 | _        | 4       |       |          | 128        |          | $\Box$          | _        | _        | _        |          | 4        | _          | _        |
|       | 29       |            | $\vdash$        | -        |          |          | _        |            | _        |          |              | 79       | $\perp$  | _        | -       | ┼  | $\sqcup$        |          | _       |       |          | 129        |          | $\perp$         | _        | _        |          |          | 4        | _          | _        |
|       | 30       | <u> </u>   |                 |          | _        |          | _        | _          |          |          |              | 80       | _        | _        |         | ┦  | $\sqcup$        |          | _ _     |       |          | 130        |          |                 | _        | _        | _        |          | 4        | _          | _        |
|       | 31       | _          | $\perp$         | _        | 4        | _        | _        | _          | _        | _        |              | 81       |          |          |         | $\perp$  | Ш               |          | - -     |       |          | 131        | Ш        |                 | _        | _        | _        |          | _        | _          | ᅬ        |
|       | 32       |            | $\vdash$        | _        | _        | $\dashv$ | _        | _          |          |          |              | 82       | $\perp$  | _        | 1       | ↓  | Ц               |          | _ _     |       |          | 132        | Ш        | $\Box$          | _        |          |          | _        | _        | _          | ᆚ        |
|       | 33       | $\vdash$   | $\sqcup$        | 4        |          | _        | _        | _          | _        |          |              | 83       | $\perp$  | _        | $\perp$ | _  | Щ               |          |         |       |          | 133        | Ш        | Ш               |          | $\Box$   |          |          | $\perp$  |            | _        |
|       | 34       |            | $\sqcup$        | 4        | _        |          | _ļ       |            |          | _        |              | 84       | _        | _        | 4       | 1_   | Ш               | _ _      |         |       |          | 134        | Ш        | Ш               | _        | _        | $\perp$  |          | _        | $\Box$     | Ц        |
|       | 35       | Щ          | $\sqcup$        | _        | _        | ļ        | _ļ       |            | _        |          |              | 85       |          | $\perp$  | _       | _  | Ш               |          | ┵       |       |          | 135        | Ш        | Ц               |          | _        |          |          |          | _          | Ц        |
|       | 36       | Щ          | $\sqcup$        | _        |          | _        | _        | _          | _        | _        |              | 86       | _        | $\perp$  |         |  | Щ               |          | _       |       |          | 136        |          |                 | _        |          |          |          |          | _          |          |
|       | 37       | <u> </u>   | $\sqcup$        | _        | _        | _        | _        | _          | _        |          |              | 87       | _        | _        | 4_      | 1_   | Ш               |          |         |       |          | 137        | Ш        | Ц               |          | _        | _        |          |          |            | $\sqcup$ |
|       | 38       | L          |                 | _        | _        | ļ        |          |            | _        |          |              | 88       | $\perp$  |          | _ _     | _  | Щ               |          |         |       |          | 138        | Ш        | Ш               | _        | _        | _        |          | _        | _          | $\Box$   |
|       | 39       | Щ          | $\sqcup$        | _        | _        |          | _        |            |          |          |              | 89       |          | _        |         | _  | Ш               | _ _      |         |       |          | 139        | Ш        |                 | _        | _        |          |          | ]        |            | $\Box$   |
|       | 40       | Щ          | $\sqcup$        |          |          | _        |          |            | _        | Ш        |              | 90       | _        |          |         | $oldsymbol{ol}}}}}}}}}}}}}}}}}}$ | Ш               |          |         |       |          | 140        | Ш        |                 |          |          |          |          | ]        |            |          |
|       | 41       | Щ          | Ц.              | _        | _        | ļ        | ļ        |            |          | Щ        |              | 91       |          |          | _       | $\perp$  | Ш               |          |         |       |          | 141        | Ш        | $\sqcup$        |          | _        |          |          |          |            |          |
|       | 42       | Ш          |                 | _        | _        |          | _        |            |          | Ц        |              | 92       | $\perp$  | $\perp$  | $\perp$ | $\perp$  | Ш               | _        |         |       |          | 142        | Ш        |                 | [        |          |          |          |          |            |          |
|       | 43       | Ш          |                 | 4        | _        | _        | 4        | _          |          |          |              | 93       | $\perp$  | $\perp$  | $\perp$ |  | Щ               | $\perp$  |         |       |          | 143        | Ш        | Ш               |          |          | $ \bot $ |          | $\perp$  |            | $\Box$   |
|       | 44       | Ш          | $\Box$          | _        |          | _        | _        |            | _        | Щ        |              | 94       | $\Box$   | _        | _       | _  | Ш               |          |         |       |          | 144        |          |                 | $\perp$  |          |          |          |          |            |          |
|       | 45       |            | $\perp$         | _ļ       | _        | _        |          | _          | $\perp$  | 山        |              | 95       | _        | $\perp$  |         | $\perp$  |                 |          |         |       |          | 145        |          |                 | $\perp$  |          |          |          |          | $_{\perp}$ | ]        |
|       | 46       | Ш          | $\perp$         | _        | _        |          |          | _          | _        | _        |              | 96       | $\perp$  |          | _       | <u> </u>   |                 | $\perp$  | $\perp$ |       |          | 146        | Ш        |                 | _        | _        |          |          | $\perp$  |            |          |
|       | 47       | Ш          | $\perp$         | $\perp$  | $\bot$   | _        | _        |            |          |          |              | 97       | $\perp$  |          | _ _     | ــــــ   |                 | $\perp$  |         |       |          | 147        |          |                 |          |          |          |          |          |            | $\Box$   |
|       | 48       | Ш          | $\perp$         |          |          |          |          | _          |          |          |              | 98       |          |          |         | $\perp$  |                 |          |         |       |          | 148        |          |                 |          |          |          |          |          |            |          |
|       | 49       | Ш          | $\perp$         | $\perp$  | _        | _        |          |            | .        |          |              | 99       |          |          | _ل_     |  | Ш               |          |         |       |          | 149        | Ш        |                 |          |          |          |          | _[       |            |          |
|       | 50       |            | Т               | Ī        |          | Т        | T        |            | П        |          |              | 100      | Т        |          |         |  |                 |          | T       |       |          | 150        |          |                 |          | $\neg$   | $\neg$   |          |          | T          | $\neg$   |